PATENT ABSTRACTS OF JAPAN

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(54) COMMUNICATION KARAOKE (ORCHESTRATION WITHOUT LYRIC) SYSTEM AND KARAOKE PLAYING TERMINAL

(57)Abstract:

PROBLEM TO BE SOLVED: To provide customer services while the utilization frequency of a communication channel is greatly reduced and to recommend the music reflecting a country wide utilization history.

SOLUTION: A host device 2 has a playing order summing information file. In the filea list of the music groupswhich are played after the music that is being playedis presented and the playing frequencies of each music of the list are statistically summed up. The device 2 timely collects the playing order history data of each KARAOKE playing terminal 1updates the file of the playing frequency of each music group list based on the data and timely transmits the updated file to each terminal 1. The terminal 1 refers to the file whenever the accompaniment music of each music is playedextracts the prescribed number of musics in the order of the higher playing frequency based on the music group list corresponding to the music. Thusthe name of the music and the selection number of the music are displayed on a display device to recommend as a next playing candidate.

CLAIMS

[Claim(s)]

[Claim 1]Many karaoke playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) - (4).

(1) Said each karaoke playing terminal records an order of a performance of the

accompaniment music as historical data about each musical piece.

(2) There is a performance order total information file in said host device. In this filea list of said musical piece groups performed by the next of the musical piece concerned is matched about said each musical pieceand playing frequency of each of said musical piece on these each musical piece group list is totaled systematically.

(3) After this host device carries out concentration of said performance order historical data of each of said karaoke playing terminal to timely and updates said each playing frequency of each of said musical piece group list in said file based on these datait distributes this file to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs said accompaniment music of each of said musical pieceit refers to said fileBased on said musical piece group list corresponding to the musical piece concernedsaid musical piece of a predetermined number is extracted in order with said high playing frequencyand it displays with a display device with a track name and a song selection number that these musical pieces should be recommended as a next performance candidate.

[Claim 2]Many karaoke playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) − (4).

(1) Said each karaoke playing terminal matches said ID of said customer who selected the song in this about each performed musical pieceand records it as play history data while it obtains ID of a customer who actually uses the terminal concerned by a predetermined acquisition means.

(2) There are a song selection person attribution information file and a customer information file in said host device. This customer information file uses said customer ID as a keyand is dealt withand customer datasuch as sexsaid customer's agean address which were registered beforehandis described. In said song selection person attribution information filea song selection person attribute number value is matched about said each musical pieceand this song selection person attribute number value is systematically computed considering sexage and regionality of said customer group which selected the song in the musical piece concernedplaying frequencyetc. as a valuation basis.

(3) This host device carries out concentration of said play history data of each of said karaoke playing terminal to timelySaid customer data is collected by referring to said customer information file based on said corresponding customer ID for said each [in these data] musical piece of everyAfter updating said song selection person attribute number value of each musical piece in said song selection person attribution information file based on these customer datathis file is distributed to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs accompaniment music of each of said musical pieceit refers to said song selection person attribution information fileSaid musical piece of a predetermined number is extracted to the musical piece concerned in order with said near song selection person attribute number valueand it displays with a display device with a track name and a song

selection number that these musical pieces should be recommended as a next performance candidate.

[Claim 3]Many karaoke playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) - (4).

(1) Said each karaoke playing terminal records each performed musical piece as play history data.

(2) There is a musical piece classification file classified by category in said host device. Each musical piece is classified according to a category according to this fileand these categories are set up on the basis of predetermined attributessuch as a keya music genreetc. of a scale at the time of a performance. Playing frequency is matched with each musical piece which belongs to these each category.

(3) After this host device carries out concentration of said play history data of each of said karaoke playing terminal to timely and updates said playing frequency of each of said musical piece in said file based on these datait distributes this file to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs accompaniment music of each of said musical pieceit refers to said fileSaid musical piece of a predetermined number is extracted in order with said high playing frequency out of said category to which the musical piece concerned belongsand it displays with a display device with a track name and a song selection number that these musical pieces should be recommended as a next performance candidate.

[Claim 4]A karaoke playing terminal used in the karaoke system according to any one of claims 1 to 3.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]Especially this invention relates to the art of providing for a customer the service which utilized computer network resourcesabout a communication karaoke system.

[0002]

[Description of the Prior Art]A host device and many karaoke playing terminals are combined with the public network as the communication karaoke system which has spread widely now is known well. By such a communication networka host device distributes karaoke data to each karaoke playing terminalor carries out concentration of the information on a customer's utilization history from each karaoke playing terminaland is building the database. A customer's ID is used as a key and informationincluding that namedate of birthetc.is beforehand registered into this database.

[0003]These people utilized such a database and have invented various services

for customers.
It is under application now.

[0004]For examplesuppose that the registered customer used arbitrary karaoke playing terminals for the database. A karaoke playing terminal acquires a customer's ID at every the use of this. And this ID is used as a key and the database of a host device is accessed. A karaoke playing terminal downloads the aforementioned variety of information about the customer of relevance from a database. A proper message is created based on these informationand from a displaythis is turned to the customer and displayed. If the date which used the karaoke playing terminalfor example is a customer's birthday as this messageit will sayI congratulate you on Mr. OO and your birthday!
[0005]
[Problem(s) to be Solved by the Invention]That isin order to offer service using such a communication networkwhenever a customer uses a karaoke playing terminalit must communicate with a host device.
[0006]Howeverif it was communicating one by one whenever the customer of days many used whole every daymonthly time communication will become huge. According to this hugenessconnection-fees gold will become immense. In additiontime until communication at each time is materialized cannot be disregardedand has a problem which is in offer of the part service.
[0007]By the wayanother technical problem occurs besides such a technical problem. A customer determines music to look at it and sing an index book first in song selection. At this timethe work selected from the musical pieces of tens of thousands of music may be troublesome. since searching although he would like to sing is troublesome as for something to sing —— for the time being —— goodness —— it may be easy if a musical piece with that right is recommended. This is also considered as customer-oriented service.
[0008]this invention is made in view of such a technical problemand comes out. There is the purpose in providing the communication karaoke system and karaoke playing terminal which can recommend the musical piece reflecting the nationwide customer's utilization history while it stops the frequency in use of ** substantially and can perform customer service.

[0009]
[Means for Solving the Problem]In order to attain said purposein this inventionmany karaoke playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) – (4).
[0010](1) Said each karaoke playing terminal records an order of a performance of the accompaniment music as historical data about each musical piece.
(2) There is a performance order total information file in said host device. In this filea list of said musical piece groups performed by the next of the musical piece concerned is matched about said each musical pieceand playing frequency of each

of said musical piece on these each musical piece group list is totaled systematically.

(3) After this host device carries out concentration of said performance order historical data of each of said karaoke playing terminal to timely and updates said each playing frequency of each of said musical piece group list in said file based on these datait distributes this file to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs said accompaniment music of each of said musical pieceit refers to said fileBased on said musical piece group list corresponding to the musical piece concernedsaid musical piece of a predetermined number is extracted in order with said high playing frequencyand it displays with a display device with a track name and a song selection number that these musical pieces should be recommended as a next performance candidate.

[0011]In order to attain said purposein this inventionmany karaoke playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) − (4).

[0012](1) Said each karaoke playing terminal matches said ID of said customer who selected the song in this about each performed musical pieceand records it as play history data while it obtains ID of a customer who actually uses the terminal concerned by a predetermined acquisition means.

(2) There are a song selection person attribution information file and a customer information file in said host device. This customer information file uses said customer ID as a keyand is dealt withand customer datasuch as sexsaid customer's agean address which were registered beforehandis described. In said song selection person attribution information filea song selection person attribute number value is matched about said each musical pieceand this song selection person attribute number value is systematically computed considering sexage and regionality of said customer group which selected the song in the musical piece concernedplaying frequencyetc. as a valuation basis.

(3) This host device carries out concentration of said play history data of each of said karaoke playing terminal to timelySaid customer data is collected by referring to said customer information file based on said corresponding customer ID for said each [in these data] musical piece of everyAfter updating said song selection person attribute number value of each musical piece in said song selection person attribution information file based on these customer datathis file is distributed to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs accompaniment music of each of said musical pieceit refers to said song selection person attribution information fileSaid musical piece of a predetermined number is extracted to the musical piece concerned in order with said near song selection person attribute number valueand it displays with a display device with a track name and a song selection number that these musical pieces should be recommended as a next performance candidate.

[0013]In order to attain said purpose furthermorein this inventionmany karaoke

playing terminals and host devices are the communication karaoke systems combined with a predetermined communications networkand were provided with following requirement (1) – (4).

[0014](1) Said each karaoke playing terminal records each performed musical piece as play history data.

(2) There is a musical piece classification file classified by category in said host device. Each musical piece is classified according to a category according to this fileand these categories are set up on the basis of predetermined attributessuch as a keya music genreetc. of a scale at the time of a performance. Playing frequency is matched with each musical piece which belongs to these each category.

(3) After this host device carries out concentration of said play history data of each of said karaoke playing terminal to timely and updates said playing frequency of each of said musical piece in said file based on these datait distributes this file to said each karaoke playing terminal timely.

(4) Whenever said each karaoke playing terminal performs accompaniment music of each of said musical pieceit refers to said fileSaid musical piece of a predetermined number is extracted in order with said high playing frequency out of said category to which the musical piece concerned belongsand it displays with a display device with a track name and a song selection number that these musical pieces should be recommended as a next performance candidate.

[0015]In additionin order to attain said purposea karaoke playing terminal of this invention shall be used in a karaoke system mentioned above.

[0016]

[Embodiment of the Invention]

= Composition ==== of a ==== system and a karaoke playing terminal = the system configuration of one example of this invention is shown in drawing 1. Many karaoke playing terminals 1 and host devices 2 which were developed nationally are combined with the communication line network 3. The host device 2 is a computer fairly highly efficient at high speed. In addition to the musical piece information database which stored the karaoke data of many musical piecesthe database for 20 recommendation is built by the storage parts store of this host device 2. The various files mentioned later are stored in the database for these 20 recommendation. The central processing unit in the karaoke playing terminal 1 is a computer about [general] a personal computer. The computer network is constituted by the karaoke playing terminal 1 and the host device 2 of these large number.

[0017]Drawing 2 is made reference and the composition of the karaoke playing terminal 1 is explained. The central processing unit 4 is connected to the communication line network 3 via the modem 5. The karaoke data of many musical pieces distributed from the host device 2 is stored in the hard disk drive 6. The karaoke data distributed consists of MIDI-signal-ized karaoke accompaniment music datalyrics data included synchronization information with accompanimentetc.

[0018]There is the navigational panel 7 for user interfaces containing a display for

indication and a keyboard in the main part of the karaoke playing terminal 1and the remote control input machine 8 also attaches. The navigational panel 7 and the remote control input machine 8 are combined with the central processing unit 4 via the operation control part 19A karaoke user performs various operational inputssuch as song selectionwith the navigational panel 7 or the remote control input machine 8 of a main partand the response indication of the device to the contents of operation and operational input is displayed on the navigational panel 7.

[0019]Reproduction of a musical piece is performed by the following procedure under control of the central processing unit 4. The accompaniment music data and lyrics data of a song selection number which were specified are read from the hard disk drive 6. Accompaniment music data is inputted into the synthesizer 9 one by oneand is changed into an audio signal. This audio signal is outputted from the loudspeaker 11 through the audio amplifier part 10. Synchronizing with this audio outputthe central processing unit 4 changes lyrics data into a character string one by oneand writes it in Video RAM 13. The coloring which can comesimultaneously shows advance of music to a lyrics-characters sequence is processed. The contents of Video RAM 13 are displayed on the display device 15 by the display control part 14. The audio amplifier part 10 has a mixing function with the output of the microphone 12.

[0020]The moving image information for background videos etc. is reproduced by the CD-ROM player 17. The video control section 16 comprises a microcomputer which operates in response to instructions of the central processing unit 4and performs the selection process of the picture image data which should be reproduced. The picture image data which carried out selection decision is reproduced by the CD-ROM player 17. And restoration processing of the regenerative data compressed is performed and it transmits to the display control part 14. The display control part 14 compounds the video signal from the video control section 16and the lyrics-characters sequence of Video RAM 13and displays them on the display device 15.

[0021]The hard disk drive 6 can be replaced by other memory storage. The CD-ROM player 17 can also be replaced by the picture reproducer of otherssuch as a digital video disc. An audio signal is reproduced from these CD-ROM player 17 or its alternate device. It is also easy to establish the signal path which inputs this audio signal into the audio amplifier part 10 via the video control section 16 and with which the loudspeaker 11 is sounded.

[0022]= A ==== song selection candidate's recommendation = when the customer uses ==== each karaoke playing terminalthe musical piece which should be performed next may not be reserved. In such a case20 music recommended as a song selection candidate during the performance of a musical piece is extracted. After a performance is completedfrom a displaythese 20 recommendation is turned to a customer and displayed. Of courseeven when many are reservedit can display according to a customer's operational input.

[0023]Although the method of extraction these 20 recommendation is mentioned later in detailthere are three kinds. The 1st is the method of being based on the

tendency of an order to have performed the musical piece in all the karaoke playing terminals. The 2nd is the method of being based on the tendency of the customer who selected the song in each musical piece in all the karaoke playing terminals. The 3rd is the method of being based on the attribute of each musical piece.

[0024]which extraction method -- an imitation -- in order to exchange information required for the extractionit communicates periodically between each karaoke playing terminal and a host device. This communication is upload of the historical data about a performanceor download of various filesand is performed in the form unified with collection processing or message distribution processing of other information on a system. The troublesome thing of communicating one by one whenever a customer uses is not performed.

[0025]= The ==== 1st extraction method : the song selection number of the performed musical piece is recorded on the hard disk drive 6 of the recommendation 20 music ===== karaoke playing terminal 1 based on a song selection order tendency as historical data as the performance order is known. The history is added whenever a customer selects a song and performs.

[0026]The host device 2 makes the performance order historical data of each karaoke playing terminal 1 upload. The host device 2 updates a performance order total information file based on much collected performance order historical data. In this filethe list of musical piece groups performed by the next of that musical piece about each musical piece is matched. The playing frequency of each musical piece is totaled by this list. That iseach performance order historical data were analyzedand what kind of musical piece was performed by the next of a certain musical pieceor the number of times is list-ized. What packed this list about all the musical piecesand made it the matrix table as a music transition matrix is shown in drawing 3. the case where a song selection number performs the musical piece of m as the Tth performance (T is a natural number) in this table after starting the performance -- following (the T+1st time) -- being performed most shows that a song selection number is a musical piece of n. Thusthe matrix table according to the playing frequency after starting a performance is created.

[0027]The host device 2 updates the performance order total information file which consists of such a matrixand downloads it to each karaoke playing terminal 1.

[0028]Whenever each karaoke playing terminal 1 performs the accompaniment music of each musical pieceit reads a performance order total information file. And paying attention to the list corresponding to the musical piece under performance20 musical pieces are extracted in the high order of playing frequency out of the musical piece group on this list. That the extracted musical piece group should be recommended as a next performance candidateas shown in drawing 4it displays with a display device with a track name and a song selection number. This example is a case where a song selection number performs the musical piece of 412112 as the Tth performanceafter starting a performanceadds a singer name to the high order of playing frequencyand shows the following 20 performance

candidates in it. In this tableas the turn of recommendation in a left end sequence was put in order from the topand the song selection number was told to the sequence of that right-hand and it told playing frequency to that rightit is displayed.

[0029]In creating a matrix tablevarious arrangementssuch as creating the matrix table according to a customer segmentor extracting the whole number of musicare possible.

[0030]= The ==== 2nd extraction method : the customer information file is created by the storage parts store of the recommendation 20 based on song selection person tendency music =====< <customer information file >> host device 2. This file is the set of the record according to customer which arranged the information relevant to each customer. Since a customer is specified individuallythe identifier (it is called customer ID) has been set up. The record according to customer is created for every customer ID of the. The fundamental registration information item etc. which the customer returned voluntarily at the time of applicationssuch as a customer's namesexan addressa telephone numbera date of birtha hobbyan occupationofficefamily structureare included in this.

[0031]The song selection person attribution information file is also created by the storage parts store of the < <song selection person attribution information file >> host device 2. In this filethe song selection person attribute number value is matched for every musical piece. This song selection person attribute number value is evaluated in the viewpoint what kind of attribute the customer with selected the song in each musical pieceand sexthe age and regionality of the customer who selected the songplaying frequencyetc. are computed as a valuation basis.

[0032]The method of computing this song selection person attribute number value is explained also including the operation by the side of the karaoke playing terminal 1. Firstby each karaoke playing terminal 1 sidewhenever it is used for a customerthe customer ID is obtained. This acquiring method is mentioned later. And it records on the hard disk drive 6 by using the song selection number of the performed musical piece as play history data. At this timecustomer ID which selected the song in that musical piece is matched.

[0033]The host device 2 makes this play history data upload. The host device 2 updates the song selection person attribute number value of each musical pieceafter collecting the play history data of each karaoke playing terminal 1. That isintensive processing is carried out statistically and each song selection person's attribute is evaluated as analyzing and mentioning each play history data later from a viewpoint of following A-D about each musical piece.

[0034]Customer ID which selected the song in this about each musical piece is first extracted in analysis. This customer ID is used as a key and the record according to customer of relevance is read out of a customer information file. And the data of sexageand an address is taken out and the number of a male customera below high school student customerand local customers is totaled. And the ratio to the total number of customers is computed. In additionplaying

frequency also totals about each musical pieceand the ratio to the maximum playing frequency in other musical pieces is also computed. Of coursethe number of customers total [these] and the maximum playing frequency also total.

[0035](A) male ratio = -- the number of male customers / total number (B) young-man ratio of customers = -- the number of below high school student customers / total number (C) of customers local ratio = -- the number of local customers / total number (D) of customers popular ratio = -- the maximum playing frequency (* each ratio is one or less positive number) in a musical piece besides total playing frequency/

Belowthe multi-dimension space which made the viewpoint of each A [-] and D each dimension is defined. This serves as space for positioning the tendency of a song selection person's attribute for every musical piece. Each ratio is dealt with as a numerical value (coordinate value) in the axis of coordinates of each dimension. Thenas shown in the example of <u>drawing 5</u>the point which consists of each coordinate value for every musical piece in 4-dimensional space becomes settled uniquely. This point turns into the point of expressing the tendency of a song selection person's attribute. The distance from the starting point is computed about the point of these each musical piece. The root sum square value of each coordinate value serves as the distance.

[0036]Thusthe song selection person attribution information file which consists of distance of each updated musical piece is downloaded to each karaoke playing terminal 1.

[0037]Whenever each karaoke playing terminal 1 performs the accompaniment music of each musical pieceit reads a song selection person attribution information file. And 20 musical piece groups with a near distance between music (the white in <u>drawing 5</u> is round) are extracted in the near order to the musical piece (black dot in <u>drawing 5</u>) under performance. By point to pointthe distance between this music takes the difference of each coordinate valueand is computed as a square root of the sum of the square of these difference.

[0038]That the extracted musical piece group should be recommended as a next performance candidateeach karaoke playing terminal 1 is displayed with a display device with a track name and a song selection numberas shown in <u>drawing 6</u>. When a song selection number performs the musical piece of 412112this example adds a singer name to order with a small distance between musicand shows the following 20 performance candidates in it. In this tableas the turn of recommendation in a left end sequence was put in order from the topand the song selection number was told to the sequence of that right-hand and it told the distance between music to that rightit is displayed. In this tablewhat has a distance between music the same as that of the musical piece of 0i.e.the music performed just beforeis displayed on the 1st. Of coursethe method of a display that the same music is not recommended can also be done.

[0039]There is a personal remote control which a customer other than the remote control for stores attached to each karaoke playing terminal 1 possessesrespectively in <<acquisition method [of customer ID in the terminal 1]

>> remote control input machine 8. This personal remote control generates an ID code which is different for every set in an output signal. The ID code and the customer who possesses are matched. The ID code of a personal remote control can be used as customer ID by this.

[0040]That isin a certain karaoke playing terminal 1a certain customer performs song selection operation with his own personal remote control. Thenthe central processing unit 4 or the operation control part 19 of the karaoke playing terminal 1 analyzes a remote control input signaland recognizes customer ID.

[0041]Various methods can be considered also to otherssuch as publishing ID cardssuch as a magnetic card which recorded customer ID on each customerand recognizing customer IDcovering the ID card of the customer who came to the store over a reading machine.

[0042]= The ==== 3rd extraction method : the song selection number of the performed musical piece is recorded on the hard disk drive 6 of the recommendation 20 music ===== karaoke playing terminal 1 based on a musical piece attribute as historical data. The history is added whenever a customer selects a song and performs. The host device 2 makes the play history data of each karaoke playing terminal 1 upload.

[0043]The musical piece classification file classified by category is created by the storage parts store of the host device 2. The song selection number of each musical piece is classified according to the category according to this file. These categories are set up on the basis of the predetermined attribute which a musical piece has. Following A − Eetc. are mentioned as this attribute.

[0044]
(**) Key (A/A″/A″Am″/A″Am″D″ /etc.)
(**) Music genre (enka/pop)
(**) Index book genre (a duet / South Korean song / war song / folk song / medley / Western music /etc.)
(**) Background image genre (Japanese emotion / citynightand rain /etc.)
Each attribute A − E are classified into plurality. For examplein the key of (a)it is classified that it is also at various kinds of keyssuch as A and A.″ Many categories are made by every one division being together put suitably from each attribute A − E.

[0045]Playing frequency is matched with each musical piece which belongs to each category. This playing frequency is updated by totaling the playing frequency for every musical piece based on much collected play history data. The host device 2 downloads the updated musical piece classification file classified by category to each karaoke playing terminal 1.

[0046]Whenever each karaoke playing terminal 1 performs the accompaniment music of each musical pieceit reads the musical piece classification file classified by category. And 20 musical pieces are extracted in the high order of playing frequency out of the category to which the musical piece under performance belongs. It displays with a display device with a track name and a song selection number as well as the case where drawing 4 and drawing 6 show that the

extracted musical piece group should be recommended as a next performance candidate.

[0047]= ====others = the playing frequency used in the ==== 1-3rd extraction methods is employable suitablyif the degree of the relative performance not only to the actual number of times but other musical pieces is shown.

[0048]In extracting the musical piece to recommendit may enable it to choose either of each 1-3rd extraction methods by a customer's operational inputand the staff of the store can set it as either.

[0049]

[Effect of the Invention]The communications processing between a host device and each karaoke playing terminal is a host device's carrying out concentration of the historical data of a performance from each karaoke playing terminalor distributing various files to each karaoke playing terminal.

[0050]A karaoke playing terminal does not take out such communications processing from a host device like the conventional service at every use of data peculiar to each customer. For this reasonit can carry out to proper timing with sufficient convenience on employment. For examplealthough communication for several user minutes had to be performed one by one with the conventional service every dayit also becomes possible in this invention to manage about one communication in one week or one month.

[0051]Thereforethe frequency in use of a communication line is stopped very smalland customer service can be performed. For this reasonconnection-fees gold can be made to reduce substantially. Since the karaoke playing terminal does not need to communicate with a host device one by one in the case of execution of serviceservice can be provided promptly.

[0052]The customer can select a song by seeing the displayed recommendation musical piecewithout seldom wavering. That isthe troublesome time and effort of looking at an index book and selecting a song from a huge number of musical pieces can be saved.

[0053]Song selection can be urged by displaying a recommendation musical piece. For this reasonit can control that it means having played with aswithout using a karaoke playing terminal for there being a customer. At a store which is charged whenever it performsit can contribute to a profit.

[0054]In this inventionthe performance candidate who made the nationwide customer's song selection history reflect can be recommended.

[0055]If it is in the invention concerning especially claim 1the musical piece recommended according to the statistical data of the history of the performance order collected from each karaoke playing terminal is displayed from a display. Thereforea song can be selected in a musical piece in the order often sung.

[0056]If it is in the invention concerning especially claim 2sexthe age and regionality of the customer group which selected the song in thisplaying frequencyetc. are evaluated as a valuation basis about each musical piece. And a near numerical musical piece is displayed on the near order from a display about the musical piece under performance. Thereforea song can be selected in the

musical piece which people with the taste similar to the customer who selected the song in the musical piece under performance have often chosen.

[0057]If it is in the invention concerning especially claim 3the category which made the valuation basis attributessuch as a music genre which a musical piece hasis providedand each musical piece is classified according to the category. And the musical piece of the category same about the musical piece under performance is displayed on order with high playing frequency from a display. Thereforea song can be selected in what the musical piece of the atmosphere similar to the musical piece under performance may be sufficient asand is sung.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1]It is a lineblock diagram of the communication karaoke system by one example of this invention.
[Drawing 2]It is a block diagram of the karaoke playing terminal by one example of this invention.
[Drawing 3]It is a schematic diagram showing the music transition matrix for extracting the musical piece by one example of this invention to recommend.
[Drawing 4]It is a chart showing the list of recommendation musical pieces displayed on the display by one example of this invention.
[Drawing 5]It is a key map showing the 4-dimensional space for positioning the tendency of the attribute of the song selection person by one example of this invention for every musical piece.
[Drawing 6]It is a chart showing the list of recommendation musical pieces displayed on the display by one example of this invention.
[Description of Notations]
1 Karaoke playing terminal
2 Host device
3 Communication line network
4 Central processing unit
5 Modem
6 Hard disk drive
7 Navigational panel
8 Remote control input machine
9 Synthesizer
10 Audio amplifier part
11 Loudspeaker
12 Microphone
13 Video RAM
14 Display control part
15 Display device
16 Video control section

17 CD-ROM player
19 Operation control part